

Claims

1. A system (300,302) for performing a switch-over in data communication in accordance with a protection switching data communication principles, **characterized in that**
 - 5 the system comprises a configurable integrated circuit of a unit (300) of the data communication for signaling a need (400) for the switch-over in real time based data communication to a configurable integrated circuit of a protecting pair unit (302) of said unit of the data communication.
- 10 2. A system according to claim 1, wherein the system provides the signaling between the units without a participation of CPU.
3. A system according to claim 1, wherein the configurable integrated circuit comprises at least one of application-specific integrated circuit (ASIC) and field-programmable gate array (FPGA).
- 15 4. A system according to claim 1, wherein the protection switching comprises a protected LSP based on a working connection and a protecting connection.
5. A system according to claim 1, wherein said unit comprises a working unit in accordance with a LSP working connection and the protection pair unit comprises a protection unit in accordance with a LSP protection connection.
- 20 6. A system according to claim 1, wherein the signal comprises a protection message for delivering that the data communication of a receiving unit is at least one of faulty and unfaulty.
7. A system according to claim 1, wherein the real time based data communication presumes the switch-over to take place in less than 50 milliseconds from an occurrence of a connection fault.
- 25 8. A system according to claim 1, wherein the data communication comprises at least one of Internet Protocol, Ethernet, and MPLS for real time telecommunication services.
9. A system according to claim 1, wherein Multiprotocol Label Switching is contained as a bearer for the data communication.

10. A system according to claim 9, wherein Multiprotocol Label Switching operates as a backbone for IP based data communication.
- 5 11. A system according to claim 1, wherein the real time based data communication is such that human senses any application based on the real time based data communication substantially immediate.
12. A system according to claim 1, wherein the data communication takes place between a source computing entity and a sink computing entity.
- 10 13. A network entity (300,302) for performing a switch-over in data communication in accordance with a protection switching data communication principles, **characterized in that**

the network entity comprises a configurable integrated circuit of a unit (300) of the data communication for signaling a need (400) for the switch-over in real time based data communication to a configurable integrated circuit of a protecting pair unit (302) of said unit of the data communication.
- 15 14. An configurable integrated circuit card for performing a switch-over in data communication in accordance with a protection switching data communication principles, wherein the configurable integrated circuit card of the data communication is adapted to signal a need (400) for the switch-over in real time based data communication to a configurable integrated circuit of a
20 protecting pair card of said card of the data communication.
15. A method for performing a switch-over in data communication in accordance with a protection switching data communication principles, **characterized in that**, the method comprises the step of

25 signaling a need (400) for the switch-over in real time based data communication from a configurable integrated circuit of a unit (300) of the data communication to a configurable integrated circuit of a protecting pair unit (302) of said unit of the data communication.
- 30 16. A method according to claim 15, further comprising before the step of signaling the step of detecting a connection fault in the data communication at the unit.

17. A method according to claims 15 – 16, further comprising the step of receiving the need at the protecting pair unit and performing the switch over by activating the data communication on the protecting pair unit.
- 5 18. A computer program product comprising a program of instructions executable by a computing system for processing a switch-over in data communication in accordance with a protection switching data communication principles, the computer program product comprising:

10 computer program code for causing the system to signal a need (400) for the switch-over in real time based data communication from a configurable integrated circuit of a unit (300) of the data communication for to an configurable integrated circuit of a protecting pair unit (302) of said unit of the data communication.